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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,367	10/22/2003	Michael A. McCabe	2002-IP-008009U1	1396

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EXAMINER

RICHARD, CHARLES R

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,367

Applicant(s)

MCCABE ET AL.

Examiner

C. R. Richard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 12-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-35 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10-22-2003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-11, drawn to a method of making a well treating fluid, classified in class 507, subclass 209.
- II. Claims 12-35, drawn to a method of treating a wellbore and the corresponding composition, classified in class 166, subclass 305.1.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of making same. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product may be made with different amounts of materials and may be at a different pH than that specified in the process here.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Applicant's attorney, Robert Kent, on November 3, 2005, a provisional election was made without traverse to prosecute the invention of group II (claims 12-35). Affirmation of this election must be made by Applicant in replying to this Office action. Claims 1-11 are withdrawn from further

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consideration by the Examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

2. The disclosure is objected to because of the following.

There is some level of inconsistency as to the description of the amount of residue in the compositions according to the invention between the Abstract (“devoid”), body of the specification (“substantially devoid”, see paragraph 5) and the claims (“at least partially devoid” in claim 12 and “at least partially dissolved” in claim 24). Appropriate correction is required.

On a related note, the second sentence of the Abstract and paragraphs 8 and 20 in the body of the specification appear to contradict themselves – a residue cannot be present as an insoluble residue and also be dissolved at the same time. Also, how does one distinguish between water and “additional water” in this same composition/context? Appropriate correction is required.

Applicant may wish to note that there is no “Detailed Description” section in the specification, but there is a “Summary of the Invention” section.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 12-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claim 12 is indefinite (and claims 13-23 also by dependency) in that from the way the claim is written, it is uncertain what step (a) requires. Is it the preparing or providing of one composition or three components? If the one is intended, then what is the difference between water and "additional water" and when is the polymer hydrated? It appears that Applicant may have intended that step (a) be to provide or prepare a composition defined in a product by process manner, but this is not a certainty given the wording.

Claims 19, 22 and 23 are (additionally) indefinite in that it is uncertain as to "when" their recited limitations are operative.

Claim 24 is indefinite (and 25-35 also by dependency) as to the difference between water and "additional" water and when the polymer is hydrated. Claim 31, 34 and 35 are (additionally) indefinite as it is uncertain as to "when" their recited limitations are operative.

For purposes of examination on the merits, the claims will be interpreted in the broadest possible manner considering this discussion on indefiniteness. Since "when" is in doubt here in many instances, and since it appears that Applicant may have intended to use a product by process definition for compositions, a match up between the final product called out in the claims and the products of the prior art will suffice for purposes of rejection on the merits regarding compositions.

Note that in the fluids of interest, some residue would be inherently present at least initially, and this residue would be of a type at least partially dissolved upon addition of base.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 12-21, 23-33 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Briscoe in US Patent 4,336,145.

Briscoe teaches a liquid gel concentrate comprised of water, a hydratable polymer and an inhibitor which retards the rate of hydration of the polymer (the rate is not zero as indicated by the discussion at column 5, lines 1-15); a pH change by dilution and/or addition of a pH changing chemical are some ways to reverse the effect of the inhibitor (see column 1, line 67 to column 2, line 11). Polymers such as guar and its derivatives, as well as cellulose and its derivatives may be used (see column 2, lines 22-27); some more particular examples of polymers are hydroxypropyl guar and carboxymethyl guar, as well as hydroxyethyl cellulose, carboxymethyl cellulose and carboxymethylhydroxyethyl cellulose (see column 3, lines 32-42). Some prehydrated polymer may be added to the concentrate (see column 4, lines 13-15).

Several specific examples of concentrates are given. One comprises water, hydroxypropyl guar, borate inhibitor and a base like sodium hydroxide to adjust the pH within the range of about 9 to about 14 (see column 4, lines 40-61); this concentrate may be diluted with water and acidified to pH about 5 to about 9 to effect hydration (see column 7, lines 35-42).

Another example shows a concentrate comprising hydrated hydroxyethylcellulose combined with water, hydroxypropyl guar, borate inhibitor and base such as sodium hydroxide to pH about 9 to about 14 (column 5, line 55 to column 6, line 31); this concentrate may be diluted with water and acidified to pH about 5 to about 9 to effect hydration of the guar polymer (see column 7, lines 35-42).

A preferred method of using the concentrates here in treatment of subterranean formations is to mix the concentrate with additional water and acid or base (as the case may be depending on the inhibitor used) continuously as the fluid is introduced into the formation, but the mixing may be done batchwise (see column 7, line 58 to column 8, line 3 and Example 1); the resulting fluids may be used in fracturing and other procedures (see column 8, lines 57-61).

Another example of interest is shown in Table I of Example 1. Here hydroxypropyl guar is mixed with water and the pH adjusted from about 9 to about 14 with NaOH (no inhibitor is present), and then the pH is lowered with hydrochloric acid or an acid mixture to below about 9.

As to claims 23 and 35, the dilution shown at column 8, lines 12-17 gives a hydroxypropyl guar gel in this concentration range; the pH described above for this final type gel is about 5 to about 9.

Here, hydrated polymer will be interpreted in its broadest possible sense to mean hydrated to some degree and given the discussion above as to indefiniteness, the hydration will be taken as happening at any time before or during the preparation of the overall composition. The presence (for at least a short time) of the insoluble residue and in an amount per claim 19 and 31 is basically inherent (at least considering the previous discussion on claims 23 and 35); given the limitations of claim 22 and 34, a pH of 9 to 14 would be sufficient to dissolve at least some of this residue. See the discussion above as to indefiniteness in the claims and how the claims will be interpreted for purposes of examination on the merits.

7. Claims 12-14, 17-18, 20-22, 24-26 and 29-30 and 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Loftin et al. in US Patent 4,440,649.

Loftin teaches well fluids comprising water, a viscosifier, a fluid loss reducer, a clay stabilizer and other components, such as a base to adjust the pH of the composition (see column 2, lines 3-14). The water may be fresh, brine or seawater (see column 2, lines 15-16). The viscosifier and fluid loss reducer may be hydroxyethylcellulose (see column 2, lines 15-34). The clay stabilizer may be a salt of formic, acetic, propionic or butyric acid (see column 2, line 65 to column 3, line 10). The base used may be sodium or potassium hydroxide, and the pH adjusted to about 8.5 to

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about 11.5. The steps of the rejected method claims are implied by the description of the compositions and the stated use.

Here, hydrated polymer will be interpreted in its broadest possible sense to mean hydrated to some degree and given the discussion above as to indefiniteness, the hydration will be taken as happening at any time before or during the preparation of the overall composition. The presence (for at least a short time) of an insoluble residue is inherent, and given the limitations of claim 22 and 34, a pH of about 8.5 to about 11.5 would be sufficient to dissolve at least some of this residue and is also a lower range than that in claims 22 and 34. See the discussion above as to indefiniteness in the claims and how the claims will be interpreted for purposes of examination on the merits.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 12-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Briscoe in US Patent 4,336,145.

Briscoe has been discussed in detail above. This reference teaches all of the limitations of the rejected claims, except for the specific pH range of claims 22 and 34 of about 10-13. As stated above, Briscoe does teach the pH range of about 9 to about 14 which encompasses that of claims 22 and 34. It would have been obvious to one of ordinary skill in the art that a pH of the range of claims 22 and 34 would be included in the larger range taught by Briscoe, and this skilled artisan would have been motivated to make fluids accordingly, thus rendering claims 22 and 34 obvious.

Note that the guar derivatives of claims 15 and 27 not specifically taught by Briscoe would have been obvious to one of ordinary skill in the art given that they are well known guar derivatives and are obvious variants of the specific ones taught. Similarly, the bases of claims 20 and 32 not specifically taught would be obvious over those specifically taught.

Conclusion


10. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The following disclose methods and/or compositions at least similar to the present invention: US Patents 4,451,389; 4,974,678; 6,311,773 and US Patent Application Publication 2003/0188870 and 2005/0056424.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. R. Richard whose telephone number is 571-272-8502. The examiner can normally be reached on M-Th, 8am-6pm and alternate Fridays, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CR Richard


PHILIP TUCKER
PRIMARY EXAMINER
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